U.S. Department of Energy
Office of River Protection
Mr. R. J. Schepens
Manager
P.O. Box 450, MSIN H6-60
Richland, Washington 99352

CCN: 047334

Dear Mr. Schepens:

CONTRACT NO. DE-AC27-01RV14136 – TRANSMITTAL FOR APPROVAL: AUTHORIZATION BASIS AMENDMENT REQUEST 24590-WTP-ABAR-ENS-02-007, REVISION 0, *CODES & STANDARDS TAILORING - ACI 349-01 CHAPTER 21*

Reference: CCN 045045, Letter, R. F. Naventi, BNI, to R. J. Schepens, ORP, "Decision to Deviate from the Authorization Basis for the Hanford Tank Waste Treatment and Immobilization Plant," dated November 20, 2002.

Bechtel National, Inc. (BNI) is submitting the attached Authorization Basis Amendment Request (ABAR) 24560-WTP-ABAR-ENS-02-007, Revision 0, to the U.S. Department of Energy's, Office of River Protection, and the Office of Safety Regulation (OSR) for review and approval. This ABAR reconciles the deviation to the authorization basis described in the reference letter.

This ABAR proposes to incorporate the use of specific sections of Chapter 21 of American Concrete Institute (ACI) 318-99 in lieu of the entire Chapter 21 as currently is described in the Safety Requirements Document Appendix C, Section 7. The specific sections of ACI 318-99 proposed provide the most current methodology with respect to seismic proportioning and detailing.

Approval of this ABAR is requested by February 12, 2003, to meet the required implementation schedule for reconciliation of decision to deviate from the authorization basis DTD 24590-WTP-DTD-ENG-02-007.

An electronic copy of ABAR 24590-WTP-ABAR-ENS-02-007, Revision 0, is provided for OSR's information and use.

Please contact Mr. Bill Spezialetti at (509) 371-4654 for any questions or comments.

Very truly yours,

R. F. Naventi
Project Director

JD/slr

Attachment: Authorization Basis Amendment Request 24590-WTP-ABAR-ENS-02-007, Revision, plus attachments

cc: Name (ALPHABETIZE)	Organization	MSIN
Barr, R. C. w/a (1 hard copy and 1 electronic copy)	OSR	H6-60
Barrett, M. K. w/o	ORP	H6-60
Beranek, F. w/a	WTP	MS6-P1
Betts, J. P. w/o	WTP	MS14-3C
Dickey, R. L. w/a	WTP	MS6-R1
DOE Correspondence Control w/a	ORP	H6-60
Ensign, K. R. w/o	ORP	H6-60
Erickson, L. w/o	ORP	H6-60
Gibson, K. D. w/a	WTP	MS6-R1
Hamel, W. F. w/o	ORP	H6-60
Hanson, A. J. w/o	ORP	H6-60
Klein, D. A. w/o	WTP	MS6-P1
Naventi, R. F. w/o	WTP	MS14-3C
PDC w/a	WTP	MS5-K.1
QA Project Files w/a	WTP	MS14-4B
Ryan, T. B. w/a	WTP	MS6-R1
Spezialetti, W. R. w/o	WTP	MS6-P1
Taylor, W. J. w/a	ORP	H6-60
Veirup, A. R. w/o	WTP	MS14-3B

Authorization Basis Amendment Request

ABAR Number 24590-WTP-ABAR-ENS-02-007 Revision 0

ABAR Title Codes & Standards Tailoring - ACI 349-01 Chapter 21

I. ABAR Review and Approval Signatures

A. ABAR Preparation

Preparer:	David Houghton (CS&A)		
	Print/Type Name	*Signature*	*Date*
Reviewer:	Mark Axup (CS&A)		
	Print/Type Name	*Signature*	*Date*

B. Required Technical Reviewers

Review Required? *For each person checked, that signature block must be completed.*

☒	E&NS Manager	Fred Beranek		
		Print/Type Name	*Signature*	*Date*
☒	QA Manager	George Shell		
		Print/Type Name	*Signature*	*Date*
☐	Operations Manager			
		Print/Type Name	*Signature*	*Date*
☐	Commissioning/Training Manager			
		Print/Type Name	*Signature*	*Date*
☒	Manager of Engineering	Fred Marsh		
		Print/Type Name	*Signature*	*Date*
☐	Construction Manager			
		Print/Type Name	*Signature*	*Date*
☒	Area Project Director	Phil Schuetz / R. Lawrence		
		Print/Type Name	*Signature*	*Date*
☐	Research & Technology Manager			
		Print/Type Name	*Signature*	*Date*
☒	PMT Chair	Dennis Klein		
		Print/Type Name	*Signature*	*Date*
☒	Safety Analysis Manager	Richard Garrett		
		Print/Type Name	*Signature*	*Date*

C. ABAR Approval

PSC Chair			
	Print/Type Name	*Signature*	*Date*
WTP Project Director			
	Print/Type Name	*Signature*	*Date*

ABAR Number 24590-WTP-ABAR-ENS-02-007 Revision 0

ABAR Title Codes & Standards Tailoring - ACI 349-01 Chapter 21

II. Description of the Proposed Change to the Authorization Basis

D. Affected Authorization Basis Documents:

Title	Document Number	Revision
Safety Requirements Document (SRD) Appendix C, Section 7.0	24590-WTP-SRD-ESH-01-001-02	1

Decision to Deviate: ☒ Yes ☐ No

If yes, DTD Number/Revision: 24590-WTP-DTD-ENG-02-007, Rev 0

Initiating Document Number/Revision 24590-WTP-CAR-QA-02-270

E. Describe the proposed changes to the Authorization Basis documents:

Revision

Revise the text, as currently described in SRD, 24590-WTP-SRD-ESH-01-001-02, Appendix C, Section 7.0, to specifically outline those sections of Chapter 21 of ACI 349-01 that are to be replaced with the corresponding sections of ACI 318-99. ons.

Justification

Chapter 21 of ACI 349-01 is based on criteria from ACI 318-95. The American Concrete Institute completed a major revision of ACI 318 between the years 1995 and 1999 with respect to seismic proportioning and detailing. The RPP-WTP project wishes to adopt the most current methodolgy for seismic detailing as presented in ACI 318-99 in lieu of that presented in ACI 318-95.

F. List associated ABARs and AB documents, if any:

24590-WTP-PSAR-ESH-01-001-01, PCAR General Information Volume I

24590-WTP-PSAR-ESH-01-001-04, HLW Facility Specific PCAR

24590-WTP-PSAR-ESH-01-002-01, PSAR General Information Volume I

24590-WTP-PSAR-ESH-01-002-02, PT Facility Specific PSAR

24590-WTP-PSAR-ESH-01-002-04, HLW Facility Specific PSAR

G. Explain why the change is needed:

The current wording in Appendix C of the SRD, Section 7.0 relating to the tailoring of ACI 349-01 Chapter 21 states that the entire Chapter be substituted with the corresponding Chapter 21 of ACI 318-99. The primary intent was that the more current methodology for seismic detailing, outlined in ACI 318-99 Chapter 21 pertaining to structures in high seismic risk region, be adopted for use on the RPP-WTP project, in lieu of those detailed requirements included in ACI 349-01 (The seismic detailing requirements of ACI 349-01 are based on ACI 318-95).

The HLW and Pretreatment reinforced concrete structures (designated Seismic Category I) of the RPP-WTP project are large shear wall and slab structures of heavy proportions which exhibit small lateral deflections. ACI 349-01 describes that at a height-to-length (h/l) ratio of less than 2, the concrete walls act in shear with insignificant bending deformation, thus boundary elements are not required. (Boundary

ABAR Number 24590-WTP-ABAR-ENS-02-007 Revision 0

ABAR Title Codes & Standards Tailoring - ACI 349-01 Chapter 21

G. Explain why the change is needed:

elements, added at the ends of shear walls, provide adequate deformability and confinement of reinforcement for in-plane wall flexure). This criteria, along with the requirements for anchorage are key elements of the ACI 349-01 design philosophy. The existing tailoring description in the SRD does not ensure that these key elements are maintained throughout the detailed design.

The purpose of this change is to clarify the primary intent of maintaining the specific provisions of ACI 349-01 while incorporating the more current methodology for seismic detailing requirements of ACI 318-99.

H. List the implementing activities and the projected completion dates:

Activity	Date
Inform DOE that AB has been revised and formally transmit electronic version	30 days or less after DOE approval
Distribute revised controlled copy pages / update WTP Library	30 days after DOE approval

Revise the following implementing documents:

	Documents	Describe extent of revisions	Date
1	24590-WTP-PSAR-ESH-01-001-01	The current revision of the PSAR is consistent with the approach described in this ABAR. However, a future ABCN will be submitted to further clarify the wording in PSAR Chapter 2	
2	24590-WTP-PSAR-ESH-01-002-01	The current revision of the PSAR is consistent with the approach described in this ABAR. However, a future ABCN will be submitted to further clarify the wording in PSAR Chapter 2	
3			
4			

	Describe other activities:	Date
1	NA	
2		
3		
4		

Authorization Basis Amendment Request

ABAR Number 24590-WTP-ABAR-ENS-02-007 Revision 0

ABAR Title Codes & Standards Tailoring - ACI 349-01 Chapter 21

I. Certification of Continued SRD Adequacy:

If this ABAR involves the deletion or modification of a standard previously identified or established in the SRD, Project Manager certification is required. The Project Director's signature certifies that the revised SRD continues to identify a set of standards that provides adequate safety, complies with WTP applicable laws and regulations, and conforms with top-level safety standards and principles. This certification is based on adherence to the DOE/RL-96-0004 standards identification process and successful completion of review and confirmation by the PSC.

WTP Project Director

Print/Type Name	*Signature*	*Date*

J. Attachments:

Attachment 1: Proposed SRD, Volume II, page changes

Attachment 2: Decision to Deviate, 24590-WTP-DTD-ENG-02-007, Rev 0 (with SE)

Attachment 3: Corrective Action Report, 24590-WTP-CAR-QA-02-270

24590-WTP-ABAR-ESH-02-007 Rev 0

Attachment 1

Proposed SRD, Volume II, page changes

Document Part	Title	No. of Pages
Appendix C, Section 7.0	ACI 349, Code Requirements for Nuclear Safety-Related Concrete Structures	1

# of pages (including cover sheet): 2

7.0 ACI 349, Code Requirements for Nuclear Safety-Related Concrete Structures

Revision: 2001
Sponsoring Organization: American Concrete Institute

WTP Specific Tailoring

The following tailoring of ACI 349-01 is required for use by the WTP contractor as an implementing standard for structural design.

Chapter 21

Replace Chapter 21 of ACI 349-01 with Chapter 21 of ACI 318-99, while maintaining the following specific provisions of ACI 349-01 Chapter 21as identified in:-

- Section 21.2.7 (anchorage)
- Section 21.6.1 (height/length criteria)

Justification: Chapter 21 of ACI 349-01 is based on criteria from ACI 318-95. The American Concrete Institute completed a major revision of ACI 318 between the years 1995 and 1999 with respect to seismic proportioning and detailing. The RPP-WTP project wishes to adopt the most current methodology for seismic detailing as presented in ACI 318-99 Chapter 21 pertaining to structures in high seismic risk region, in lieu of that presented in ACI 349-01 Chapter 21.

The HLW and Pretreatment reinforced concrete structures (designated Seismic Category I) of the RPP-WTP project are large shear wall and slab structures of heavy proportions, which exhibit small lateral deflections. ACI 349-01 Chapter 21 describes that at a height-to-length (h/l) ratio of less than 2, the concrete walls act in shear with insignificant bending deformation, thus boundary elements are not required. This criteria, along with the requirements for anchorage are key elements of the ACI 349-01 design philosophy contained in Chapter 21.

The purpose of maintaining the specific sections of ACI 349-01 Chapter 21 as cited above is to ensure that the specific provisions of ACI 349-01 are maintained while incorporating the more current methodology for seismic detailing requirements of ACI 318-99.

Note
Where either:

- ACI 318-99 Chapter 21 cross references to other sections within the ACI 318 code, or
- a conflict between the ACI 318-99 and ACI 349-01 codes occur,

the requirements of ACI 349-01 shall take precedence.

24590-WTP-ABAR-ESH-02-007 Rev 0

Attachment 2

Decision to Deviate, 24590-WTP-DTD-ENG-02-007, Rev. 0 (with SE)

Document Part	Title	No. of Pages
24590-WTP-DTD-ENG-02-007, Rev. 0	Decision to Deviate from the Authorization Basis	7

# of pages (including cover sheet): 8

Decision to Deviate from the Authorization Basis

DH. 11/19/02

DTD No: 24590-WTP-DTD-ENG-02-~~07~~ 007 Rev No: 0

The approvers of this form have determined that it is critical to project progress to temporarily deviate from the Authorization Basis (AB) as allowed in RL/REG-97-13. This temporary situation will be corrected no later than 30 days (or 90 days for changes requiring DOE approval) from the date this form is approved by the Area Project Manager. If DOE approval of the request to amend the AB is required, Environmental and Nuclear Safety (E&NS) is responsible for notifying DOE verbally within 24 hours, and in writing (including a copy of this form) within 72 hours, after the DTD is approved.

ABCN No. 24590-WTP-ABAR-ENS-02-007 Safety Evaluation No. 24590-WTP-SE-ENS-02-005

Identify the specific design changes that are not in compliance with the AB (include the document numbers of affected design documents).

The current wording in Appendix C of the SRD, Section 7.0 relating to the tailoring of ACI 349-01 Chapter 21 states that the entire Chapter be substituted with the corresponding Chapter 21 of ACI 318-99. The primary intent was that the more current methodology for seismic detailing, outlined in ACI 318-99 Chapter 21 pertaining to structures in high seismic risk region, be adopted for use on the RPP-WTP project, in lieu of those detailing requirements included in ACI 349-01. (The seismic detailing requirements of ACI 349-01 are based on ACI 318-95).

The HLW and Pretreatment reinforced concrete structures (designated Seismic Category I) of the RPP-WTP project are large shear wall and slab structures of heavy proportions which exibit small lateral deflections. ACI 349-01 describes that at a height-to-length (h/l) ratio of less than 2, the concrete walls act in shear with insignificant bending deformation, thus boundary elements are not required. (Boundary elements, added at the ends of shear walls, provide adequate deformability and confinement of reinforcement for in-plane wall flexure). This criteria, along with the requirements for anchorage are key elements of the ACI 349-01 design philosophy. The existing tailoring description in the SRD does not ensure that these key elements are maintained throughtout the detailed design.

The purpose of this Decision to Deviate, and the subsequent Authorization Basis Amendment Request is to clarify the primary intent of maintaining the specific provisions of ACI 349-01 whilst incorporating the more current methodology for seismic detailing requirements of ACI 318-99.

Affected Documents / Drawings		
Number	**Rev.**	**Title**
Structural Design Criteria	0	24590-WTP-DC-ST-01-001
Seismic Analysis and Design Approach	2	24590-WTP-RPT-ST-01-002

Describe the specific deviation from the AB associated with implementing the change. Identify the AB document(s) and the affected section(s).

Revision

Revise the text, as currently described in SRD, 24590-WTP-SRD-ESH-01-001-02, Appendix C, Section 7.0, to specifically outline those sections of Chapter 21 of ACI 349-01 that are to be replaced with the corresponding sections of ACI 318-99. These will be the specific sections of ACI 349-01 that explicitly pertain to ACI 318-95. The ABAR, currently being developed in support of this DTD, will identify these specific sections.

Justification

Chapter 21 of ACI 349-01 is based on criteria from ACI 318-95. The American Concrete Institute completed a major revision of ACI 318 between the years 1995 and 1999 with respect to seismic proportining and detailing. The RPP-WTP project wishes to adopt the most current methodolgy for seismic detailing as presented in ACI 318-99 in lieu of that presented in ACI 318-95.

Decision to Deviate from the Authorization Basis

DTD No: 24590-WTP-DTD-ENG-02-~~07~~ 007 (Dft. 11/19/02) Rev No: 0

In addition to the Safety Evaluation referenced above, perform an evaluation to determine the following:

☒ The specific design changes do not cause or threaten imminent danger to the workers, the public, or the environment from radiological, nuclear, or chemical hazards.

Prepared by:

David Houghton	D Houghton.	11/13/02.
Print/Type Name	Signature	Date

Decision to deviate from the AB recommended by:

Al Dausman	Al V Dausman	11/13/02
ADS / DCE Staff Supervisor (Print/Type Name)	Signature	Date
Fred Beranek		11/14/02
E&NS Manager (Print/Type Name)	Signature	Date

NOTE: E&NS is responsible for the 24-hour verbal and 72-hour written notifications to DOE-OSR as described above.

Decision to deviate from the AB approved by:

Don Scribner	D J Scribner	11/14/02
Area Project Engineering Manager / DCE (Print/Type Name)	Signature	Date
Bob Lawrence (PTF)	B K Lawrence	11/14/02
Phil Scheutz (HLW)	P H Scheutz	11/14/02
Area Project Manager (Print/Type Name)	Signature	Date

Decision to deviate from the AB closed.

Area Project Engineering Manager (Print/Type Name)	Signature	Date

24590-WTP-DTD-ENG-0200
Rev. 0

Safety Checklist for Design

This checklist shall be used for a safety screening of primary design drawings and specifications. The checklist shall be used for safety evaluations associated with actual authorization basis changes (ABCN or ABAR).

Design Document No: 24590-WTP-DC-ST-01-001 **Rev:** 0

ABCN/ABAR No: (if used as safety evaluation) 24590-WTP-ABAR-ENS-02-007

Safety Evaluation No: (if used as SE) 24590-WTP-SE-ENS-02-005

Brief description of Design:

The current wording in Appendix C of the SRD, Section 7.0 relating to the tailoring of ACI 349-01 Chapter 21 states that the entire Chapter be substituted with the corresponding Chapter 21 of ACI 318-99. The primary intent was that the more current methodology for seismic detailing, outlined in ACI 318-99 Chapter 21 pertaining to structures in high seismic risk region, be adopted for use on the RPP-WTP project, in lieu of those detailing requirements included in ACI 349-01. (The seismic detailing requirements of ACI 349-01 are based on ACI 318-95).

The HLW and Pretreatment reinforced concrete structures (designated Seismic Category I) of the RPP-WTP project are large shear wall and slab structures of heavy proportions which exibit small lateral deflections. ACI 349-01 describes that at a height-to-length (h/l) ratio of less than 2, the concrete walls act in shear with insignificant bending deformation, thus boundary elements are not required. (Boundary elements, added at the ends of shear walls, provide adequate deformability and confinement of reinforcement for in-plane wall flexure). This criteria, along with the requirements for anchorage are key elements of the ACI 349-01 design philosophy. The existing tailoring description in the SRD does not ensure that these key elements are maintained throughtout the detailed design.

The purpose of this Decision to Deviate, and the subsequent Authorization Basis Amendment Request is to clarify the primary intent of maintaining the specific provisions of ACI 349-01 whilst incorporating the more current methodology for seismic detailing requirements of ACI 318-99.

AB Documents Reviewed:

Document Number	Rev	Section
24590-WTP-SRD-ESH-01-001-02 Safety Requirements Document (SRD)	1i	Appendix C, Section 7.0
24590-WTP-PSAR-ESH-01-001-01 Preliminary Safety Analysis Report to Support PCAR, General Information Volume 1	0a	Chapter 2
24590-WTP-PSAR-ESH-01-001-04 Preliminary Safety Analysis Report to Support PCAR, Facility Specific Volume 4 – HLW	0	Chapter 2
24590-WTP-PSAR-ESH-01-002-01 Preliminary Safety Analysis Report, General Information Volume 1	0	Chapter 2
24590-WTP-PSAR-ESH-01-002-02 Preliminary Safety Analysis Report, Facility Specific Volume 2 – Pretreatment	E	Chapter 2
24590-WTP-PSAR-ESH-01-002-04 Preliminary Safety Analysis Report, Facility Specific Volume 4 – HLW	0	Chapter 2

Safety Checklist for Design

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Design Document No: 24590-WTP-DC-ST-01-001 **Rev:** 0

ABCN/ABAR No: (if used as safety evaluation) 24590-WTP-ABAR-ENS-02-007

Safety Evaluation No: (if used as SE) 24590-WTP-SE-ENS-02-005

This safety checklist aids in determining if this design change falls within the threshold of changes that may be made without prior DOE approval. It also serves to document the engineering safety evaluation of this design change.

GENERAL REVIEW		YES	NO
1.	Does the change modify or delete a standard prescribed in the Safety Requirements Document Volume II (SRD)?	☒	☐
2.	Does the change include modifications other than those providing additional details for SSCs described in Chapter 2 of the PSAR[1]?	☒	☐
3.	Does the change affect the descriptions or figures in the LCAR[2] or Partial Construction Authorization Request (PCAR)[3]?	☒	☐
4.	Are any plant general arrangement drawings that are figures in the PSAR changed?	☐	☒
5.	Is there a change in classification, new items being classified, or existing items deleted? (SDC, SDS, RRC, SC-I, SC-II, SC-III, PC-3, PC-2)	☐	☒
6.	Does the change affect the safety function descriptions in Chapter 4 of the PSAR?	☐	☒
7.	For any of the SSCs, does this change affect any of the associated control strategy development (CSD) records?	☐	☒
8.	Are any other Authorization Basis documents affected by this change? (ISMP, QAM, or RPP) (Also ISAR & HAR)[4]	☐	☒

If any question above is checked "YES", an ABCN is probably required.

Continue with answering all the Technical Review questions.

TECHNICAL REVIEW These questions evaluate design change affects on DBE hazards analysis.				
SYSTEMS (general)		YES	NO	N/A
9.	Are any new components being added containing radioactive or hazardous materials?	☐	☒	☐
10.	Is a different type of component used to perform the safety function?	☐	☒	☐
11.	Does the change modify SDC/SDS component's function (e.g. auto to manual), failure mode or reliability?	☐	☒	☐

[1] Assumes the PSAR (General Information, PT, HLW, LAW, & BOF Volumes) is approved.

[2] Assumes the LCAR is still in effect but this reference may be deleted if PCAR or CAR supersedes the LCAR.

[3] Assumes PCAR is approved but this reference may be deleted if PCAR is superseded by CAR

[4] Assumes ISAR and HAR have not yet been superseded by PSAR.

JK 1112/07

24590-WTP-DTD-ENG-02-007
Rev.0

Safety Checklist for Design

This checklist shall be used for a safety screening of primary design drawings and specifications. The checklist shall be used for safety evaluations associated with actual authorization basis changes (ABCN or ABAR).

Design Document No: 24590-WTP-DC-ST-01-001 **Rev:** 0

ABCN/ABAR No: (if used as safety evaluation) 24590-WTP-ABAR-ENS-02-007

Safety Evaluation No: (if used as SE) 24590-WTP-SE-ENS-02-005

TECHNICAL REVIEW These questions evaluate design change affects on DBE hazards analysis.				
SYSTEMS (general)		**YES**	**NO**	**N/A**
12.	Is there a change in the volume or critical dimension of any tank containing radioactive or hazardous materials?	☐	☒	☐
13.	Does the change increase the concentration or amount of radioactive or hazardous materials being handled?	☐	☒	☐
14.	Is there an increase in system design or operating pressure or temperature?	☐	☒	☐
15.	Are design imposed position control requirements for valves changed?	☐	☒	☐
16.	Does the change route high or moderate energy lines near SDC/SDS SSCs?	☐	☒	☐
17.	For non-ITS modifications, does the design resulting from the modifications affect any SSCs which is SDC (e.g. non-seismic/seismic)?	☐	☒	☐
18.	Are there changes to material selection affecting corrosion/ erosion resistant materials?	☐	☒	☐
19.	Are there changes to position related interlocks?	☐	☒	☐
20.	Does the change reduce the tank purge air flow that may affect hydrogen accumulation?	☐	☒	☐
21.	Is there a change in the chemical composition of the process material that affect chemical reactions or increase hydrogen generation?	☐	☒	☐
CONTROLS & INSTRUMENTATION AND ELECTRICAL		**YES**	**NO**	**N/A**
22.	Are any process level or chemical control points, trips or alarms changed?	☐	☒	☐
23.	Are requirements for redundancy/separation/isolation of SDC/SDS SSCs changed?	☐	☒	☐
24.	Are single failure requirements for ITS SSCs changed?	☐	☒	☐
25.	Does the change add or remove any Vital Bus Loads (Emergency Diesel Generator)?	☐	☒	☐
26.	Are any loads added or removed from SDC uninterruptible power supplies (UPS)?	☐	☒	☐
27.	Are any time delays or actuation times changed?	☐	☒	☐
28.	Does the change reduce the Emergency Diesel Generator operating capabilities (e.g. fuel oil inventory)?	☐	☒	☐
RADIOLOGICAL AND HVAC		**YES**	**NO**	**N/A**
29.	Does the change modify the Radiation Monitoring System location or response?	☐	☒	☐
30.	Does the change modify any portion of HVAC system, including doors and/or walls which may change air flow patterns, that is within the RCA?	☐	☒	☐
31.	Are any door interlocks or alarms changed?	☐	☒	☐
32.	Are there any changes to the C5/R5 zone boundaries?	☐	☒	☐
33.	Is any radiation shielding changed including shield wall openings?	☐	☒	☐

DR 11/21/07
24590-WTP-DTD-ENG-02-00
Rev. 0

Safety Checklist for Design

This checklist shall be used for a safety screening of primary design drawings and specifications. The checklist shall be used for safety evaluations associated with actual authorization basis changes (ABCN or ABAR).

Design Document No: 24590-WTP-DC-ST-01-001 **Rev:** 0

ABCN/ABAR No: (if used as safety evaluation) 24590-WTP-ABAR-ENS-02-007

Safety Evaluation No: (if used as SE) 24590-WTP-SE-ENS-02-005

CIVIL/STRUCTURAL		YES	NO	N/A
34.	Are there any increases in loads or changes in load paths?	☐	☒	☐
35.	Are there any increases in floor or wall loads or significant relocation of loads?	☐	☒	☐
36.	Does the change affect the melter glass spill event?	☐	☒	☐
FIRE PROTECTION		**YES**	**NO**	**N/A**
37.	Is there an increase in combustible loading or ignition sources in any fire area including electrical cables?	☐	☒	☐
38.	Does the change affect fire barriers separating fire areas or redundant SDC SSCs?	☐	☒	☐
REGULATORY		**YES**	**NO**	**N/A**
39.	Based on the answers to the above technical questions and any other analysis, does the change create a new DBE?	☐	☒	☐
40.	Based on the answers to the above technical questions and any other analysis, does the change result in more than a minimal (≥ 10 %) increase in the frequency or consequence of an analyzed DBE as described in the Safety Analysis Report?	☐	☒	☐
41.	Based on the answers to the above technical questions and any other analysis, does the change result in more than a minimal decrease in the Safety Functions of important-to-safety SSCs or change how a Safety Design Class SSC meets its respective safety function?	☐	☒	☐
42.	Does the change result in a noncompliance with applicable laws and regulations (i.e., 10CFR820, 830, and 835), nonconformance to top-level safety standards (i.e., DOE/RL-96-0006), or fail to provide adequate safety?	☐	☒	☐

Safety Checklist for Design

This checklist shall be used for a safety screening of primary design drawings and specifications. The checklist shall be used for safety evaluations associated with actual authorization basis changes (ABCN or ABAR).

Design Document No: 24590-WTP-DC-ST-01-001 **Rev:** 0

ABCN/ABAR No: (if used as safety evaluation) 24590-WTP-ABAR-ENS-02-007

Safety Evaluation No: (if used as SE) 24590-WTP-SE-ENS-02-005

REGULATORY		YES	NO	N/A
43.	Does the change result in nonconformance to the contract requirements associated with the authorization basis document(s) affected by the change?	☐	☒	☐
44.	Does the change result in an inconsistency with other commitments and descriptions contained in portions of the authorization basis or an authorization agreement not being revised?	☐	☒	☐

If any of the Technical Review questions is answered "YES", a DBE hazards analysis may be affected that may require ISM process review prior to proceeding with the change. Contact E&NS for assistance in determining if an ISM review is required or if there are questions on DOE approval of the change.

All "YES" answers for questions 1 through 41 must be explained in greater detail. "Yes" or "No" answers to questions 42-44 must be explained in greater detail. Provide a description and/or explanation below and on the ABCN or ABAR, as appropriate.

Describe or explain answers, as appropriate

1. This change modifies the tailoring of implementing standard ACI 349-01, as described in the SRD Appendix C, Section 7.0

2. This change will provide addition guidance to the application of ACI 349-01 and ACI 318-99 in relation to seismic detailing. Chapter 2 of the PSAR will be modified to include more specific guidance.

3. This change will provide addition guidance to the application of ACI 349-01 and ACI 318-99 in relation to seismic detailing. Chapter 2 of the PCAR will be modified to include more specific guidance.

42. This change involves a standards change that falls below the level of detail described in Subpart B of 10CFR830, Nuclear Safety Management. This technical standards changes does not relate to Contractor requirements called out in 10CFR835, Occupational Radiation Protection or 10CFR820, Procedural Rules for DOE Nuclear Activities. This change does not conflict with the requirements in the top-level standard, DOE/RL-96-0006. This change has been confirmed safe because the previously approved (by DOE) specific provisions of ACI 349-01 will be adopted while incorporating the more current methodology for seismic detailing requirements of ACI 318-99.

43. The change will allow continued conformance to contract requirements associated with the PCAR and PSAR since the change does not impact the need, intent, or scheduled delivery of these authorization basis documents.

44. All affected AB documents will be revised for consistency.

	Print/Type Name	Signature	Date
Prepared By:	Al Dausman	Al Dausman	11/14/02
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